

REMARKS

Claims 1-35 are pending in the present application and were examined. Claims 1-6, 8-11, 13-20, 22-27 and 29-35 stand rejected and Claims 7, 12, 21 and 28 are objected to. In response, Claims 1-5, 7, 11-13, 15-29 and 33 are amended, no claims are cancelled and no claims are added. Applicants respectfully request reconsideration of pending Claims 1-35 in view of at least the following remarks. Reconsideration and withdrawal of the rejections of record are requested in view of such amendments and the following discussion.

I. Objection to the Drawings

The Examiner has objected to FIG. 14, block 656, as being incorrectly labeled as "UPSTREAM DEVICE ADDRESS." Applicants have amended FIG. 14, block 656, to state -- DOWNSTREAM DEVICE ADDRESS." Replacement Sheet for FIG. 14 is attached hereto.

II. Claim Objections

The Examiner has rejected Claims 2, 20 and 27 due to various informalities.

Regarding claim 2, Claim 2 has been amended such that the preamble now recites wherein receiving notification of the DDoS attack further comprises.

Regarding claims 20 and 27, Claims 20 and 27 have been amended to recite "the received routing protocol update" as suggested by the Examiner. Accordingly, in view of the Applicants' amendments to claims 2, 20 and 27, Applicants respectfully request the Examiner reconsider and withdraw the objections to claims 2, 20 and 27.

III. Claims Rejected Under 35 U.S.C. §112

The Examiner has rejected Claims 4, 13, 21 and 28-29 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Regarding claim 4, Claim 4 has been amended to indicate that the one or more filters are signed using a digital signature of the Internet host and that the filters are transmitted to the upstream router including a digital certificate of the Internet host.

Regarding claims 13 and 29, Claims 13 and 29 are amended to recite the following claim features:

comparing the selected destination address component
against a routing table;

verifying that the downstream router is a next hop router
according to the routing table.

Support for Applicants' amendment to claims 13 and 29 is provided at paragraphs 0052-0053 and 0080 of Applicants' specification.

Regarding claims 21 and 28: Claims 21 and 28 have been amended as requested by the Examiner. Accordingly, Applicants respectfully submit that claims 4, 13, 21 and 28-29 now particularly point out distinctly from the subject matter which Applicants regard as the invention. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the 35 U.S.C. §112, second paragraph objection of claims 4, 13, 21 and 28-29.

IV. Claims Rejected Under 35 U.S.C. §103

The Examiner rejects Claims 1-6, 8-10, 15-20, 22-27 and 29-35 under 35 U.S.C. §103(a) as being unpatentable over Smith, et al., "A Protocol and Simulation for Distributed Communicating Firewalls ("Smith") in view of Shyne et al., "Using Active Networking to Thwart Distributed Denial of Service Attacks" ("Shyne"). Applicants respectfully traverse this rejection.

To establish a *prima facie* case of obviousness, the following criteria must be met: (1) there must be some suggestion or motivation to modify the reference or combine the reference teachings, (2) there must be a reasonable expectation of success, and (3) the prior art references must teach or suggest all the claim limitations. (MPEP §2142)

Regarding claims 1 and 15: Claims 1 and 15 are amended to recite the following claim features which are neither taught or suggested by either Smith or Shyne for the references of record:

receiving, by an Internet host, notification of a distributed denial of service (DDoS) attack;

...; and

once security authentication is established, transmitting one or more filters to the upstream router such that attack traffic is dropped by the upstream router to terminate the DDoS attack, wherein the upstream router includes a preprogrammed DDoS squelch time to live value to define an expiration time for the one or more filters.

Regarding the Examiner's citing of Smith, Smith teaches a communicating gateway firewall (CGFW) where protocol, one of a LAN firewall or a CGFW node can initiate the protocol with another CGFW node on behalf of the originator (see page 77, left column, third paragraph). Applicants respectfully submit that Smith fails to teach notification received an Internet host of a DDoS attack. As a result, the Examiner cites Shyne to teach detection of the DDoS attack.

After a careful review of the entire specifications of both Smith and Shyne, Applicants are unable to identify a teaching or suggestion with regards to a DDoS squelch time to live value within

the upstream router to define an expiration time for the one or more filters transmitted from the Internet host to the upstream router, as recited by amended claims 1 and 15. Accordingly, Applicants respectfully submit that Applicants' amendments to claims 1 and 15 prohibit the Examiner from establishing a *prima facie* case of obviousness of claims 1 and 15 over the combination of Smith in view of Shyne, since the combination of references fail to teach or suggest each of the claim features recited by amended claims 1 and 15.

Accordingly, claims 1 and 15, as amended, are patentable over the combination of Smith in view of Shyne, as well as the references of records. Consequently, Applicants respectfully request the Examiner to reconsider and withdraw the §103(a) rejection of claims 1 and 15.

Regarding claims 2-4, claims 2-4 based on the dependency from claim 1 also patentable over the combination of Smith in view of Shyne as well as the references of record. Consequently, Applicants respectfully request that the Examiner reconsider and withdraw the §103(a) rejection of claims 2-4.

Regarding the Examiner's rejection of claims 16-20 and 22-25, claims 16-20 and 22-25 based on the dependency of claim 15 are also patentable over the combination of Smith in view of Shyne. Consequently, Applicants respectfully request the Examiner to reconsider and withdraw the §103(a) rejection of claims 16-20 and 22-25.

Regarding the Examiner's rejection of claim 5, claim 5 is amended to recite the following claim feature which is neither taught or suggested by the combination of Smith in view of Shyne or the references of record:

once verified, generating a filter expiration time for each filter based on a preprogrammed DDoS squelch time to live value, such that the filters are uninstalled once the expiration time expires.

As indicated above with reference to the rejection of claims 1 and 15, the combination of Smith in view of Shyne fail to teach the above recited feature of amended claim 5. Accordingly, Applicants respectfully submit that Applicants' amendment to claim 5 prohibits the Examiner from establishing a *prima facie* case of obviousness of amended claim 5 over the combination of Smith in view of Shyne since the combination of Smith in view of Shyne fails to teach the above recited claim feature of amended claim 5. Consequently, Applicants respectfully request the Examiner reconsider or withdraw the §103(s) rejection of amended claim 5.

Regarding claims 6 and 8-10, based on their dependency from claim 5, as amended, as also patentable over the combination of Smith in view of Shyne as well as the references of record. Consequently, Applicants respectfully request the Examiner reconsider and withdraw the §103(a) rejection of claims 6 and 8-10.

Regarding claims 26 and 33, claims 26 and 33 are amended to recite the following claim feature which is neither taught or suggested by the combination of Smith in view of Shyne as well as the references of record:

once verified, generate a filter expiration time for each filter based on a preprogrammed DDoS squelch time to live value, such that filters are uninstalled once the expiration time expires.

For at least the reason described above, Applicants respectfully submit that Applicants' amendment to claims 26 and 33 to include the above recited claim feature prohibits the Examiner from establishing a *prima facie* case of obviousness of claims 26 and 33 over the combination of Smith in view of Shyne. Consequently, Applicants respectfully request that the Examiner reconsider and withdraw the §103(a) rejection of claims 26 and 33.

Regarding claims 27 and 29-32, claims 27 and 29-32 based on their dependency from claim 26 are patentable over the combination of Smith in view of Shyne. Consequently, Applicants respectfully request the Examiner reconsider and withdraw the §103(a) rejection of claims 27 and 29-32.

Regarding claims 34 and 35, claims 34 and 35 based on their dependency from amended claim 33 are also patentable over the combination of Smith in view of Shyne. Consequently, Applicants respectfully request that the Examiner reconsider and withdraw the §103(a) rejection of claims 27 and 28.

The Examiner rejects Claims 11 and 13-14 under 35 U.S.C. §103(a) as being unpatentable over Smith in view of U.S. Patent No. 6,425,004 issued to Hardjono ("Hardjono"). Applicants respectfully traverse this rejection.

Regarding claim 11, claim 11 is amended to recite the following claim feature which neither taught or suggested by the combination of Smith in view of Hardjono as well as the references of record:

once verified, generating a filter expiration time for each filter based on a preprogrammed DDoS squelch time to live value, such that the filters are uninstalled once the expiration time expires.

Regarding the Examiner's citing of Hardjono, Hardjono fails to provide any teachings or suggestions with regards to the generation of a filter expiration time according to a DDoS squelch time to live value which is programmed by an administrator for received filters. Hence, for at least the reason as described above, Applicants respectfully submit that Applicants' amendment to claim 11 prohibits the Examiner from establishing a *prima facie* case of amended claim 11 over Smith in view of Hardjono as well as the references of record. Consequently, Applicants respectfully request that the Examiner reconsider and withdraw the §103(a) rejection of amended claim 11.

Regarding claims 13 and 14, claims 13 and 14 based on their dependency from claim 11 are also patentable over the combination of Smith in view of Hardjono. Consequently, Applicants

respectfully request that the Examiner reconsider and withdraw the §103(a) rejection of claims 13 and 14.

V. Allowable Subject Matter

The Examiner has objected to Claims 7, 12, 21 and 28 are being dependent upon a rejected base claim. Applicants respectfully thank the Examiner for recognizing the allowability of Claims 7, 12, 21 and 28. However, such claims are also allowable based on their dependency from amended Claims 5, 11, 19 and 26, respectively.

CONCLUSION

In view of the foregoing, it is submitted that Claims 1-35, as amended, patentably define the subject invention over the cited references of record, and are in condition for allowance and such action is earnestly solicited at the earliest possible date. If the Examiner believes a telephone conference would be useful in moving the case forward, he is encouraged to contact the undersigned at (310) 207-3800.

If necessary, the Commissioner is hereby authorized in this, concurrent and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly, extension of time fees.

Respectfully submitted,
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I hereby certify that this correspondence is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Nedy Calderon
Nedy Calderon

12/21/04
Date